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UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Patent Interference 105,685 (RES)  
Technology Center 1600

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WYETH,  
(Named inventors: Anthony F. Hadfield, Syed M. Shah,  
James A. Provost, Aeri Park, Rex A. Shipplett,  
Brenton W. Russell, and Beat T. Weber),  
Patents 6,673,838 B2 and 7,291,347 B2,  
Junior Party,

v.

SEPRACOR, INC.  
(Named inventors: Thomas P. Jerussi, Chrisantha H. Senanayake,  
and Nandkumar N. Bhongle)  
Applications 10/720,134, 11/091,518 and 12/011,083,  
Senior Party.

Before: RICHARD E. SCHAFFER, JAMESON LEE, and  
RICHARD TORCZON, *Administrative Patent Judges*.

**JUDGMENT and RECOMMENDATION**

**1 Judgment**

2 As part of a settlement agreement between Wyeth and Sepracor,  
3 Wyeth has become the owner of Sepracor's involved applications. As  
4 provided in 37 C.F.R. § 41.206, it is appropriate to enter judgment when the  
5 involved applications and patents become commonly owned.

1       The record of this interference shows that Sepracor was accorded a  
2 constructive reduction to practice date of April 6, 1999, for the subject  
3 matter of the three counts – Counts 5, 6 and 7. Paper 105. Wyeth's priority  
4 statement alleges August 30, 2000, as its earliest dates of conception and  
5 actual reduction to practice. Paper 22. Since Wyeth did not allege a date of  
6 invention earlier than the effective date accorded to Sepracor, we award  
7 judgment on priority against Patents 6,673,838 and 7,291,347 as to the  
8 subject matter of Counts 5, 6 and 7.

9       **Recommendation**

10       During the interference, certain prior art came to the attention of the  
11 Board. A single judge order (Paper 109) discussed the possibility that the  
12 involved claims were unpatentable under 35 U.S.C. §§ 102 or 103 in light of  
13 the prior art. Paper 109 is incorporated in and made part of this judgment.  
14 A copy is attached.

15       Pursuant to 37 C.F.R. § 1.127(c), we recommend that the patentability  
16 of the claims of Applications 10/720,134, 11/091,518 and 12/011,083 be  
17 considered in light of the prior art discussed in Paper 109.

18       **ORDER**

19       For the reasons stated, it is

20       **ORDERED** that judgment on priority as to the subject matter of  
21 Counts 5, 6 and 7 (Paper 108, pp. 2-4), is awarded against Patents 6,673,838  
22 B2 and 7,291,347 B2;

23       **FURTHER ORDERED** that claims 1-3 (corresponding to Count 5),  
24 Claims 23-34 and 46 (corresponding to Count 7) of Patent 6,673,838 B2,  
25 and Claims 1-9 of Patent 7,291,347 B2 (corresponding to Count 6) shall be  
26 cancelled (35 U.S.C. § 135(a));



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Paper 109  
Entered: 1 February 2010

UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

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Patent Interference 105,685 McK  
Technology Center 1600

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**WYETH**

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Applications 10/720,134, 11/091,518 and 12/011,083,

Senior Party.

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Before: FRED E. McKELVEY, *Senior Administrative Patent Judge.*

**PATENTABILITY OF CLAIMS**

**A. Introduction**

A merits panel of the Board has determined that certain Sepracor  
applications contain a written description of O-desmethylvenlafaxine succinate.  
See Paper 102, pages 23-41 entered concurrently herewith.

1 In connection with motions already filed, considered and decided, the  
2 following prior art came to the Board's attention:

Husbands	U.S. Patent 4,535,186 Ex 2028	13 Aug. 1985
Rudolph 1	U.S. Patent 5,916,923 Ex 1023	29 Jun. 1999
Rudolph 2	European Patent Application 0 639 374 A2 Ex 2029	22 February 1995

3  
4 Husbands and Rudolph 2 are prior art vis-à-vis Sepracor and Wyeth under  
5 35 U.S.C. § 102(b).

6 Rudolph 1 is prior art vis-à-vis Wyeth under 35 U.S.C. § 102(b).

7 Rudolph 1 is prior art vis-à-vis Sepracor under 35 U.S.C. § 102(e) having  
8 issued after Sepracor's effective filing date of 6 April 1999. Rudolph 1 is based on  
9 an application (08/368,521) filed 4 January 1995, an application which is said to be  
10 a "continuation" of an application (08/083,848) filed 28 June 1993.

11 The disclosures of Rudolph 1 and Rudolph 2 appear to be similar. In fact,  
12 Rudolph 2 claims priority based on Rudolph 1 (Ex 2029, cover page, item 30).

13 Based on evidence and arguments presented by the parties in connection  
14 with Sepracor's opposition (Paper 88) to Revised Wyeth Motion 2 (Paper 77),  
15 Sepracor takes the position that O-desmethylvenlafaxine succinate (ODMV  
16 succinate) is described in its various applications. The Board has agreed with  
17 Sepracor. If the Sepracor applications contain a written description of ODMV  
18 succinate, then it would appear that the three prior art references set out above also  
19 describe ODMV succinate. Under the circumstances, it would appear that both  
20 party's claims corresponding to Counts 5, 6, and 7 are unpatentable under  
21 35 U.S.C. § 102 or 35 U.S.C. § 103.

1           **B. Facts**

2           Claim 60 of Sepracor application 10/720,134 claims:

3                   A compound which is O-desmethylvenlafaxine succinate.

4           Rudolph 2, in its background of the invention, states that the active  
5 ingredients of the Rudolph invention include

6                   (1-[2-(dimethylamino)-1-(4-methoxyphenyl) ethyl] cyclohexanol),  
7 or therapeutically acceptable salts thereof, which are known generally as  
8 venlafaxine and its analogues. Ex 2029, page 3:3-5.

9           Venlafaxine is disclosed in U.S. Patent 4,535,186 (Husbands—Ex 2028)  
10 and had been previously reported to be useful as an antidepressant. Ex 2029,  
11 page 3:5-6.

12           Husbands (Ex 2028) is incorporated by reference into Rudolph 2. Ex 2029,  
13 page 3:7.

14           In Rudolph 2, venlafaxine should be understood to include (1) the free base  
15 and pharmaceutically acceptable salt forms of venlafaxine, (2) the racemate and its  
16 individual enantiomers, and (3) venlafaxine analogs, both as racemates and as their  
17 individual enantiomers. Ex 2029, page 3:7-10.

18           According to Rudolph 2, venlafaxine has been shown to be a potent inhibitor  
19 of monoamine *neurotransmitter* uptake, a mechanism associated with clinical  
20 antidepressant activity. Due to its novel structure, venlafaxine is said to have a  
21 mechanism of action unrelated to other available antidepressants. Ex 2029,  
22 page 3:11-14.

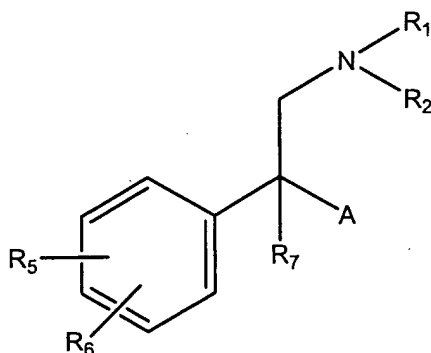
23           Rudolph states that it is believed that venlafaxine's mechanism of action is  
24 related to potent inhibition of the uptake of the monoamine neurotransmitters  
25 *serotonin* and *norepinephrine*. To a lesser degree, venlafaxine also is said to  
26 inhibit *dopamine* reuptake. Ex 2029, page 3:15-17. For additional discussion on

1 uptake of *serotonin*, *norepinephrine* and *dopamine*, see, e.g., Ex 1053, page 50:13  
2 through page 55:16 where on cross-examination Dr. Martin H. Teicher describes  
3 data in Table 3 of Muth, *Drug Development Research*, page 196 (1991) relating to  
4 uptake.

5 The Rudolph 2 invention is said to provide a method of  
6 treating, preventing, or controlling a variety of ailments, including obesity, panic  
7 disorder, post-traumatic stress disorder, late luteal phase dysphoric disorder  
8 (premenstrual syndrome), attention deficit disorders, with and without  
9 hyperactivity, Gilles de la Tourette syndrome, bulimia nervosa, generalized anxiety  
10 disorder or Shy Drager Syndrome in mammals, preferably in humans. Each of  
11 these disorders is said to exhibit a physiological basis for treatment by  
12 venlafaxine's ability to inhibit monoamine neurotransmitters. Ex 2029,  
13 page 3:28-34.

14 Rudolph 2 describes a "genus" of "compounds of this invention." Ex 2029,  
15 page 4:39 through page 5:44.

16 The "preferred [subgenus] compounds" have the formula:



17  
18 where the various R and A moieties may be:

19 R<sub>1</sub> can be hydrogen or alkyl of 1 to 3 carbon atoms (one carbon atom would  
20 be methyl).

21 R<sub>2</sub> can be alkyl of 1 to 3 carbon atoms (one carbon atom would be methyl).

1 R<sub>5</sub> can be hydrogen.

2 R<sub>6</sub> can be hydroxyl (—OH).

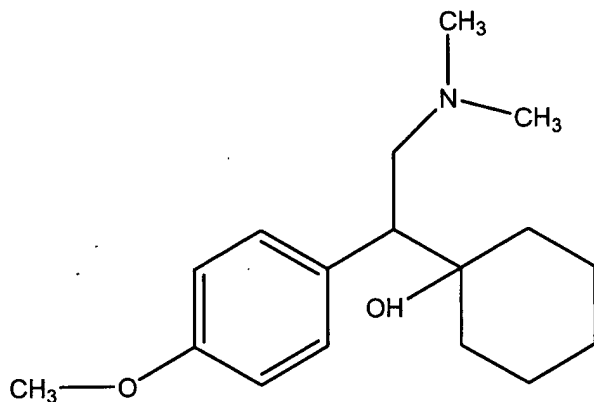
3 R<sub>7</sub> can be hydrogen.

4 A can be cyclohexanol when R<sub>4</sub> is hydrogen and n is 2 and there is no  
5 double bond in the formula shown at page 5:5.

6 This "broad" subgenus disclosure does not anticipate Sepracor claim 1  
7 reproduced above.

8 However, Rudolph 2 goes on to state that compounds "[o]f particular interest  
9 are the compounds 1-[(2-dimethylamino)-1-(4-methoxyphenyl)ethyl]cyclohexanol  
10 and 1-[(2-dimethylamino)-1-(4-hydroxyphenyl)ethyl]cyclohexanol and the  
11 enantiomers and pharmaceutically acceptable salts thereof.

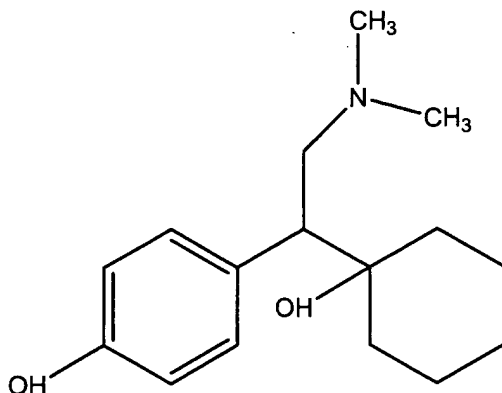
12 The first compound is venlafaxine.



13  
14  
15 Venlafaxine is the "preferred compound" where R<sub>5</sub> is hydrogen and R<sub>6</sub> is *methoxy*  
16 [—O—CH<sub>3</sub>] in the 4-position of the phenyl ring.

17 The second compound is O-desmethylvenlafaxine:





O-desmethylvenlafaxine (ODMV) does not "fit" within the "preferred [subgenus] compounds" because while  $R_5$  can be hydroxyl [ $-\text{OH}$ ],  $R_6$  cannot be hydrogen. ODMV does "fit" within the broad genus described by Rudolph at page 4:45 through page 5:20 where  $R_5$  can be hydroxyl and  $R_6$  can be hydrogen. Ex 2029, page 5:19.

Nevertheless, it must be remembered that ODMV is a metabolite of venlafaxine. Ex 2029, page 3:17-18. According to Rudolph 2, ODMV is venlafaxine's major metabolite in humans—meaning that when venlafaxine is administered to humans it metabolizes into ODMV.

Rudolph 2 also describes acids which can be used to make pharmaceutically acceptable salts. Those acids can be inorganic or organic acids, including [1] hydrochloric, [2] hydrobromic, [3] fumaric, [4] maleic, [5] succinic, [6] sulfuric, [7] phosphoric, [8] tartaric, [9] acetic, [10] citric, [11] oxalic and similar acids. Ex 2029, page 5:54-57.

With respect to dosage, Rudolph 2 states (Ex 2029, page 6:20-44; italics added):

Preferably the pharmaceutical composition is in unit dosage form, e.g. as tablets or capsules. In such form, the composition is sub-divided in unit doses containing appropriate quantities of the active ingredient;

1 the unit dosage forms can be packaged compositions, for example,  
2 packeted powders or vials or ampoules. The unit dosage form can be  
3 a capsule, cachet or tablet itself, or it can be the appropriate number of  
4 any of these in package form. The quantity of the active ingredient in  
5 *a unit dose* of composition may be varied or adjusted from 2 mg. or  
6 less to 50 mg. or more, according to the particular need and the  
7 activity of the active ingredient. The usual oral recommended dose of  
8 venlafaxine for humans may be between about 75 and about 200  
9 mg/day and this dose may be administered in two or three divided  
10 doses, preferably with food if administered orally. A maximum  
11 recommended daily dose for humans would be about 375 mg, but it  
12 will be understood by one skilled in the art that dosage under this  
13 invention will be determined by the particular circumstances  
14 surrounding each case.

15 Claim 4 of Rudolph 2, as published, calls for the "use" of venlafaxine or a  
16 pharmaceutically acceptable salt thereof. Ex 2029, page 8:20-21.

17 Claim 5 of Rudolph 2, as published, calls for the "use" of ODMV or a  
18 pharmaceutically acceptable salt thereof. Ex 2029, page 8:23-24.

19 Claim 6 calls for the "use" of a daily dose from 50 mg/day to 375 mg/day.  
20 Ex 2029, page 8:26-27.

### 21 **C. Discussion**

22 What is good for the goose is good for the gander.

23 If Sepracor is correct that it is entitled to § 120 benefit in connection with  
24 Wyeth's § 135(b)(2) motion, then it would appear that Rudolph 2 anticipates  
25 Sepracor claim 1 reproduced above. Other Sepracor and Wyeth claims may also  
26 be unpatentable under § 102(b) over Rudolph. The claims which Sepracor sought

1 to have designated as not corresponding to Count 7 would appear to be  
2 unpatentable under § 103 over Rudolph for the same reason that those claims are  
3 unpatentable over the subject matter of Count 7. Sepracor has already had a full  
4 and fair opportunity to establish unobviousness, but failed to do so. If Sepracor  
5 claim 1, reproduced above, is unpatentable under § 102(b) (an issue to be looked  
6 into), then claims sought to be designated as not corresponding to Count 7 would  
7 be unpatentable under § 103 (an issue already resolved in this interference).

8 **D. Priority**

9 Wyeth does not allege a date earlier than the priority date accorded to  
10 Sepracor.

11 Accordingly, as acknowledged at oral argument by Wyeth, it cannot prevail  
12 on priority—at least on the current record.

13 On the other hand, if Sepracor and Wyeth claims are *not* unpatentable over  
14 Rudolph 2, then the Board might have to reevaluate whether Sepracor is entitled to  
15 its benefit date—in which case Wyeth might prevail on priority.

16 A decision on priority will be held in abeyance pending resolution of  
17 patentability.

18 **E. Order**

19 Upon consideration of the record, it is

20 ORDERED that a conference call is set for **17 February 2010 at 2:00**  
21 **pm [1400 hours]** to discuss how patentability might be addressed in this  
22 interference.

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